



California Regional Water Quality Control Board

Santa Ana Region



Terry Tamminen
Secretary for
Environmental
Protection

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Arnold Schwarzenegger
Governor

February 3, 2004

Mr. Timothy Haltmeyer, Manager
Environment, Health, Safety and Medical
Northrop Grumman Corporation
One Hornet Way, PA12/W9
El Segundo, CA 90245

**APPROVAL OF WORKPLAN FOR INSTALLATION OF MONITORING WELLS
REQUIRED BY CLEANUP AND ABATEMENT ORDER NO. R8-2003-108, FORMER
NORTHROP GRUMMAN CORPORATION Y-12 FACILITY, 301 ORANGETHORPE
AVENUE, ANAHEIM, CA**

Dear Mr. Haltmeyer:

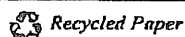
We have reviewed the Workplan dated January 5, 2004, submitted by your consultants, Environmental Engineering and Contracting, Inc. (EEC), in compliance with Cleanup and Abatement Order (CAO) No. R8-2003-108. The CAO required Northrop Grumman Corporation (NGC) to install off-site groundwater-monitoring wells. These wells will be installed to determine the vertical and lateral extent of the groundwater contamination west of the former NGC's Y-12 facility.

EEC has proposed to drill one 14 -inch diameter soil boring to a depth of 200 feet at a location equidistant between existing wells NMW-8 and NMW-9. A conductor casing will be installed to a depth of 50 feet, and reverse mud-rotary technique will be utilized to advance the boring to total depth. Drill cuttings will be collected and logged every five-feet. Geophysical logging [resistivity (single point, 16-inch, 64-inch and guard), spontaneous potential, natural gamma, caliper and deviation logs] will be conducted in the open hole to aid in determining sub-surface lithology and placement of the well screens and seals.

Two 4-inch diameter wells (schedule 80 PVC) will be installed in the soil boring at depths of 120 and 200 feet. Each well will have 10 feet of stainless steel screen. The proposed screen intervals are 110 feet below ground surface (bgs) to 120 feet bgs, and 190 feet bgs to 200 feet bgs, with PVC blank casing extending to the ground surface. If a perched aquifer is encountered at 80 feet, a 2-inch diameter PVC well will be installed with 10 feet of screen at the soil-water interface. A licensed surveyor will survey the wellheads. The wells will be developed, and groundwater will be sampled and analyzed for volatile organic compounds (VOCs) by EPA Method 8260B. A report of the findings of this investigation will be submitted to Board staff for review.

Your workplan is approved. As stated in the CAO, you are required to install the ground water monitoring wells within sixty days of the date of this letter. Therefore, the wells must be

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installed by April 6, 2004. A report on the installation of the wells shall be submitted by April 27, 2004. Also, depending on the results of this investigation, NGC may be required to further delineate the contaminant plume. You are also reminded that as stated in the CAO, by February 9, 2004, you are required to submit a conceptual feasibility study for alternate groundwater remediation scenarios.

Because two additional contaminants, 1,4-dioxane and perchlorate, have been identified in the groundwater in the vicinity of the Y-12 facility, we request that you also analyze the groundwater for 1,4-dioxane by EPA Method 8270C and for perchlorate using EPA Method 314.0. Please provide the results of these analyses in your investigation report.

We are aware that in the past you have experienced difficulty in obtaining access agreements with property owners in this area. If you experience difficulty in obtaining an access agreement for the proposed well, please notify Board staff immediately, as Board staff and/or Orange County Water District staff may be able to provide assistance in this matter.

Please contact us five days prior to the initiation of any drilling and sampling activities pertaining to the new wells. If you have any questions, please contact Maneck G. Chichgar, Project Manager, at (909) 782-3252, or you may call Ann Sturdivant, Chief or our SLIC/DoD Section, at (909) 782-4904.

Sincerely,



Gerard J. Thibeault
Executive Officer

cc: Malissa H. McKeith, Loeb & Loeb
Virginia Grebbien, OCWD
Mark Zeko, EEC, Inc.

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